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ABSTRACT

This document presents 34 guidelines for educational managers who are implementing or considering planning-programing-budgeting systems (PPBS). The guidelines, divided into planning, programing, budgeting, and systems analysis, are designed to point out potential trouble spots that could occur at any of the stages of system implementation. The guidelines were derived from the literature, administrative experience, and interaction with PPBS practitioners. A related document is ED 049 550. (RA)

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PPBS IMPLEMENTATION GUIDELINES

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William H. Curtis of the Research Corporation of the Association of School Business Officials has stated, "According to the latest information we have it would seem that upwards of three-quarters of the states of this nation, through their legislatures, are either considering some kind of pattern of PPBS at the state level or have already mandated this process.[1] For this reason, school administrators are beginning or will be beginning to ask the practical questions. How do you implement PPBS? Where do we begin?

A cookbook procedure is entirely impractical due to the dynamic state of education and the fact that each school district is different. Even so, there are several guidelines which should be followed preceding, during, and subsequent to the implementation of PPBS. From reviewing the literature, administrative experience and skills, and interaction with PPBS practitioners,

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[1] Research Corporation of the Association School Business Official, Report of the First National Conference of PPBS in Education, the Association, (1969), p. 33.

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the authors of this paper have developed the following PPBS implementation guidelines for school districts throughout the United States.

PLANNING

1. Planning First - As Robert Mager states: "If you're not sure where you're going, you're liable to end up someplace else and not even know it."[2] Therefore, in successful implementation of PPBS planning must transpire before the other phases of this concept. Unfortunately, most installations begin with program accounting. Immediately, new account codes are devised; unit cost analyses are performed; and curricular specialists are bypassed. This is not the way to start implementation of PPBS. In short, plan first.

2. Implementation Costs - School administrators should be aware of the fact that the implementation of PPBS will undoubtedly cost money. The authors would prefer, however, to refer to the implementation process as requiring educational resources (e.g., people, materials, time) with dollars as the means of procuring these resources. The administration must first estimate the resources required and following this, release adequate time and money to obtain these resources.

It may be profitable for school officials to inquire at state and federal agencies concerning the availability of funding for PPBS projects. In addition, administrators should examine their current operations to determine the feasibility of reallocating present resources to release an amount sufficient for implementation needs.

3. Widespread Involvement - Before PPBS can be organized and implemented, personnel must be selected to provide the necessary input information involved, in addition to providing a comprehensive and objective treatment to this phase

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[2]Robert F. Mager, Preparing Instruction Objectives, (San Francisco: Fearon Publishers, 1961), p. vii.

of planning. An organization chart of possible personnel involved is found in Appendix A. Selection of personnel should not necessarily be made by the school board in order to avoid the committee being branded as the "board's committee." The board should serve as the coordinating factor and should formulate the committees only with the assistance of the school administration. It is not the authors' intent to enumerate on which type of people would be best qualified for each area of participation since each local district must assess who is most influential, knowledgeable, and objective in the particular district.

4. Define Roles - It is important that the personnel involved be given a set of the guidelines in order to perform their respective roles effectively. Most of the people chosen have little or no knowledge of what PPBS is, let alone how it functions. It is the administrator's duty to clearly define in writing first, what is to be involved, and second, the amount of time expected to accomplish each task, and where each committee reports after the tasks have been accomplished.

After roles are clearly defined, a task force (directly responsible to the superintendent) should be formed to carry out the predetermined duties in the various areas. (See Appendix B)

5. Review Current Operations - Many times this aspect is taken for granted. Practitioners often rush into PPBS, try to erase all the previous procedures and start from base zero. This can only lead to an early death of PPBS in the school district. As was noted earlier in this paper, a mode of comparison is needed during implementation. We need to know and to understand our current operations to be able to move in the direction of PPBS and finally allow it to evolve our current traditional strategy into the dominating operation.

6. Review Other PPBS Projects - Before implementing PPBS into a school

district current projects and efforts should be reviewed. Others' successes and failures should be analyzed intensively. Information about this concept is available from various school districts including Milford, New Hampshire; Danbury, Connecticut; Clark County, Nevada; Skokie, Illinois; and Montgomery County, Maryland. Knowledge of current trends and events in PPBS will direct a school district toward a rational strategy rather than impulse implementation.

7. Formal Philosophy - A formal statement of a school district's educational philosophy should be developed by a selected committee of various interests. This committee should include board members, administrators, instructional personnel, students, community people and possibly, a resource person. The committee should be aware not only of the school and community history but also have knowledge within the subject area of philosophy. Their statement should reflect the actual procedures and operational values of the school district; it should specify all assumptions in operational terms and it should consider a hierarchy of values within the school district.

Orlich and Shermis, two professors of educational philosophy, in a critical analysis of school philosophies hypothesized:

> The awareness level of educational values within a school district is directly related to the quality and precision of the written philosophy and accompanying objectives.[3]

Ultimately then, this statement would serve as a structure base when developing district-wide goals.

8. Define District Wide Goals and Objectives - A school district should identify district-wide goals from its educational philosophy and determine operational

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[3]Donald C. Orlich and S. Samual Shermis, "Educational Philosophy as Mythology: A Critical Analysis of School Philosophies," Administrators Notebook, XIV (December, 1965), 3.

objectives to be achieved. Goals should reflect the students' needs while objectives should be utilized by the instructional staff to achieve these goals.

James Livingston and Arthur Costa from Sacramento State College have established eighteen goal categories for school districts.[4] Their goal categories include such items as accumulation of knowledge, skill to acquire and transmit knowledge, desire for knowledge and so forth. They have recommended following the development of goals, that each goal be categorized by priorities.

Objectives are more explicit than goals, have a time frame, and are often measurable. Accomplishment of several objectives, leads to the accomplishment of one particular goal. It is recommended by the authors that school districts upon the completion of district-wide goals develop a taxonomy of objectives starting with district-wide objectives (broadest) through individual task performed in each program (most specific).

9. Establish Time Periods - When implementing PPBS, time periods and target dates for beginning and ending major activities should be stipulated well in advance. It is suggested that school districts design a PPBS event calendar which states who is responsible for what activities during what time period. Without time periods, school districts will continue to operate on day-to-day operations.

10. Prepare PPBS Procedure Manual - To ensure a smoother adoption of PPBS in a school district, it may be advisable to prepare a procedures manual. This manual should describe and include descriptions of district-wide goals and objectives, brief statement of educational philosophy, personnel to be

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[4]James A. Livingston, "Educational Goals and Program-Planning-Budgeting System (PPBS)," Journal of Secondary Education, 45 (November, 1970), 307-9.

involved and their role, operational time plan, tentative program structure, and so forth. Since PPBS is a continuous process, this manual should be revised and expanded periodically.

11. In-Service Training - Assuming that the personnel chosen to work toward implementing PPBS have limited knowledge about it, in-service training will be necessary. Conferences, workshops, and seminars are possible ways of exposing these people to the basic idealogy of PPBS. It may also be wise for the school board and administration to seek the services of a consultant to work with the task force during the implementation period. In fact, the authors suggest that a consultant be used in order that the task force and committee members keep from straying too far from the guidelines and to answer any questions.

In-service training is undoubtedly the most important guideline for personnel as they strive toward implementation in that the more knowledgeable and objective they can be concerning PPBS, the chances of success will be greater.

12. Continuous Planning - As the authors have previously noted, planning is logically the function that determines in advance what should be done. It is usually thought that planning should occur before any of the other steps of implementation, but there is no reason planning cannot and should not be utilized during the other stages of development. John D. Kennedy in a symposium on accountability noted that ..."planning is a constant part of the total managerial process, with planning revisions being made as often as alternative courses of action are demanded during the execution of the other phases of management activity."[5] In order for PPBS to succeed, administrators must not only view planning as a first step in the implementation process;

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[5]John D. Kennedy, "Planning for Accountability Via Management by Objectives," Journal of Secondary Education, 46 (December, 1970), 348.

rather they should view planning on a continuum in order to function effectively in the dynamic climate PPBS demands.

13. Develop Long-Range Planning - Administrators must be aware of the fact that any decision they formulate today will influence the future as well as the present. This viewpoint is important as one views the long-range planning rationale for PPBS. Changes in programming affect a student's educational career; changes in personnel, classload, and salary administration affect the quality of education and decisions about building design affect the programs offered and the method of teaching employed, as well as the cost of both.[6]

In addition, past operational practices have often been referred to as "crisis management," where management is in the habit of putting out fires after they have started, rather than taking precautions to avoid the problems. Long-range planning, therefore, is a necessity, the object of which is to look at the future direction of the organization in terms of its goals and objectives, its outlined procedures for achieving them, and the total resources needed.

PROGRAMMING

14. Determine Type of Program Structure -In brief, a program structure may be defined as the organization of the general program areas. Several types of program structures can be developed by a school district. Contemporary styles include subject matter (e.g., science), grade level (e.g., first grade), building unit (e.g., Smith Grade School), certification format (e.g., elementary level), and services performed (e.g., special education). Also, as an aid to designing a program structure, guidelines developed by the United States Office of Education may be beneficial. Perhaps the most ideal type of program

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[6]Robert M. Durstine and Robert A. Howell, Toward PPBS Program Budgeting in a Small School District, U. S. Office of Education, Educational Research Information Center, (Washington: Government Printing Office, 1970), ED 041 372, p. 38.

structure is subject matter due to the curriculum emphasis.

15. Identify Tentative Programs - After selecting a type of program structure, a school district should identify its tentative programs and formulate a program format. From this format, analysis of individual programs can begin. Without a tentative structure a school district may be starting PPBS in many different directions.

16. Construct Program Description - In this phase of planning our utmost concern should be "what" is the program about? In addition, the school officials should describe the major activities involved in including the nature and scope of the program as well as the rationale of the program. Other areas of importance in the description are as follows:

a. The program title should be concise and simple. (e.g., math K-12).

b. The purpose of the program should be outlined in a manner such as "who should receive the information," and, "what do we want to accomplish for these groups?"

c. We should outline the program goals and be concerned with content (courses), processes (methods), resources (materials), and outcomes (behavior).[7]

d. The program objectives should be outlined explicitly and in a measurable fashion. Some examples of objectives would be knowledge (to know), skills (to do), attitudes (to feel), and inquiry (to ask).[8]

17. Redefine Program Structure - Following a complete program analysis, a school district's program structure should be redesigned. During analysis, a district may find overlapping activities and other interests not in the original structure. The new program structure should be a clear, complete document reflecting a taxonomy of activities.

18. Select Pilot Programs - Many states which are considering PPBS have

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[7]Hartley, "What is PPBS?," (paper presented at the PPBS Workshop, Ball State University, May 21, 1971), p. 6.

[8]Ibid., p. 6

implemented pilot projects. The authors advise school districts considering PPBS also to begin implementation with selected instructional programs. An experimental project may indicate problems and shortcomings which can be prevented or alleviated in full implementation. A final advantage of a pilot program is that it may serve as a model for other programs.

19. Enumerate Recent Accomplishments - This part of the programming phase should be quite evident to school officials. By accomplishments, we simply mean describe recent results of the program, negative as well as positive. The result of this procedure is a better understanding of goals achieved, or progress toward goals. In addition, projections for future activities including recommendations may logically follow a list of accomplishments to date.

20. List Program Constraints - By constraints, we mean factors restricting the program. This could include such factors as money, time, adequately trained personnel, and so on. Proper attitudes, goals, resources, and training are equally important factors if the implementation phase of PPBS is to succeed.

21. Develop Program Evaluation - We need to be concerned primarily with the method and criteria for evaluation. Just because PPBS is implemented does not mean we will have instant evaluation.

One possibility school administrators should consider is Program Evaluation and Review Technique (PERT). Under this method, the program would not only be evaluated, but controlled, monitored, and so forth. By using a PERT type of evaluation, a critical path network could assist in identifying potential problems and assist in possible alternative courses of action.

BUDGETING

22. Develop Budget Coding System - All public school districts are required to report expenditures to their state department. To insure proper accounting

and reporting, a majority of these districts utilize a coding system which describes each expenditure in a lump sum fashion (e.g., 100 administration, 200 instruction, etc.). In that traditional budgeting lumps expenditures in this manner, it is difficult to see where the major dollar concentrations are. PPBS requires a greater amount of information than the traditional coding system will report. For this reason, each school district should develop a coding system to satisfy their information needs. Basic information needs might include the fiscal year (e.g., 1970-71, code 0), fund (e.g., general fund, code 500), function (e.g., instruction, code 200), object (e.g., salaries, code 211), facility (e.g. Smith Grade School, code 9), and program (e.g., mathematics, code 02). Since states will continue to require traditional expenditure classification codes until state-wide adoption of PPBS, it is recommended by the authors that the traditional coding system be simply expanded in the digit codes needed to provide the necessary information.

23. Merge Program Budget Into Program Structure - Following the allocation of scarce resources to the various programs, the budget must become a significant component of the program structure. As previously mentioned, most school districts' budgets are isolated in the fiscal department. With this isolation, PPBS can become a fiscal weapon rather than a planning tool.

24. Develop a Financial Report - A financial report should be coordinated and prepared by a school district for the public. By utilizing PPBS, a school district can conveniently disclose program accomplishments and future instructional resource needs. A financial report can easily serve as a communication tool to improve public support.

25. Determine Dissemination of Information - Traditional line-item budgets have not only confused taxpayers but administrators as well. PPBS has the distinct advantage in that it dissects expenditures in such a way that certain figures will be more meaningful to different individuals. For example,

administrators need to have access to all the data so that the fiscal integrity and curricular effectiveness will prevail over both the short and long-range planning. Taxpayers, however, want a breakdown of the budget which delineates where their tax dollars are being spent. Legislatures require information which will assist them in determining the state aid for public schools. PPBS has the capacity of supplying clear and concise data to each of these groups. In addition, PPBS requires that each school district determines what and how much information different parties should receive in order to prevent any abuses or misinterpretation of the data.

26. Integrate Staff - As implied several times in this paper, PPBS is not only a fiscal tool. For this reason, it is of paramount importance, that excellent communications exist between the fiscal office and curriculum leaders and staff. Without this integration, PPBS becomes another "educational placebo."

SYSTEMS ANALYSIS

27. Limit Terms - The term systems analysis has approximately seventy different acronyms. Some of these include PERT, MIS, cost-benefit analysis, operations research (OR), input-output analysis and so forth. These many different code names for systems analysis generally only add confusion to its jumbled meaning. It is suggested by the authors when school districts begin to employ systems analysis that the various terms be limited and above all, clearly defined.

28. Outline Systems Specification - When developing a systems technique, school districts should structure the specifications of that technique to correspond with the remainder of PPBS. This suggestion again implies the needed integration of the entire school system when implementing and utilizing PPBS.

29. Develop Data Bank - In utilizing any systems analysis technique data is the primary requisite. School officials have always processed data, but usually unorderly and irregularly. It is suggested that data be collected from all sources throughout the school system and be submitted to one central processing point. By developing a data bank, accuracy of input data is increased and the impairment or loss of important information is avoided.

30. A Computer is Instrumental - PPBS requires more detailed and complex information than conventional budgeting. In the initial stages of PPBS implementation, data processing equipment may not be necessary, but to obtain a sophisticated system which is data-based, data processing equipment is a requirement. In future sophisticated PPBS setting, data processing may even become the core component due to its unlimited capabilities.

31. Utilize Existing Systems - PERT, MIS, OR, are all analytical systems approaches to planning through management science. As was suggested earlier, these terms are often used interchangeably and the terminology is not often clear. However, a well-defined, clearly developed systems model has many positive implications for educators if PPBS is to be utilized. The programs of a school system cannot be properly financed and designed if planners are uncertain of the total system that they support. In fact, the total underlying rationale of PPBS is the implication of choices between different means-end alternatives. Schools both large and small should begin to consider systems analysis as an intricate tool in implementing PPBS.

32. Apply Cost-Effectiveness, Benefits-Received Principles - Cost-effectiveness can best be described as an analytical attempt to relate the cost of a project to the effectiveness (in terms of achieved goals) of that project. Viewed as a means of solving problems of choice, cost-effectiveness allows the analyst to choose the alternatives which offers the least cost with the greatest effectiveness. Benefits-received, on the other hand, allows the analyst to

measure the total benefits received (some may be arbitrary) for each dollar spent.

A paradox may seem to exist as one views both criteria in conjunction with PPBS. This, however, should not discourage the practitioner. Cost-effectiveness should be applied to PPBS since we are (in the budgeting sense) concerned with the most efficiency for the least amount of dollars. This is evident as taxpayers clamor about the accountability of their tax dollars and the outputs derived. But school officials need to go one step further. They need to be cognizant of the fact that the cost-effectiveness approach may not be the best approach especially as we begin to adapt curricula to pressing social issues. Here, the benefits-received criteria must be utilized in that we are more concerned with the benefits derived from the expenditure rather than the magnitude of the expenditure. PPBS considers each criteria contingent upon the circumstances surrounding the decision.

33. Consider Simulation Models - Simulation models can be useful to school districts in that such a model allows the administrator to view the effect of various policy changes without implementing them in the system. Models may serve as a "testing ground" for programs that need to be tried (because of manpower shortages, etc.) before incorporated.

The Philadelphia School System developed a simulation model in 1967 to represent the district as a single aggregated enterprise.[9] The purpose of the simulation was, among other things, to provide some preliminary guidelines as to the effect of major policy changes on the district's financial outflow and operating statistics.[10] Such models need to be developed as school officials

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[9]Roger L. Sisson, Some Results of an Urban School District, U. S. Office of Education, Educational Resources Information Center, (Washington: Government Printing Office, 1967), Microfishe ED 012 096.

[10]Ibid.

contemplate developing and implementing PPBS. By doing this, untested plans can be validated and proven feasible before actual implementation into the total system occurs.

34. Consider Qualitative and Quantitative Measures - Systems analysis, in many instances, concerns itself primarily with quantifiable data. This temptation should be avoided since students and personnel deserve to be treated as something more than statistical data. In many large schools, students are treated merely as numbers and teachers often feel a similar loss of identity due to their own lack of participation in policy formation affecting them. Yet systems analysis, quantitatively oriented as it may seem, has potential in measuring qualitative factors. It should be noted, for example, that systems analysis, as an expression of man's creative inquiry, uses human terms to construct our knowledge and beliefs.[11]

Even though PPBS is not one hundred per cent operational in any school district, many are successfully moving toward a complete adoption. But the road to success is littered with many failures. These failures are generally the result of trying to convert an existing system to PPBS overnight. In addition, failures have resulted because of a general lack of statewide coordinating authority. The authors suggest that one major step toward coordination would be increased efforts by state Associations of School Business Officials (ASBO), various state study councils and other organizations. Clearcut, concise definitions are necessary since PPBS means all things to all people. Therefore, it is suggested that schools should train their officials for the particular system they are in and not in some technique called PPBS.

In summary, these guidelines, like PPBS, are not a panacea. The authors plan to test the feasibility of these guidelines in a laboratory

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[11] Hartley, Planning-Programming-Budgeting A Systems Approach, p. 67.

(school district) situation. This testing should lead to further revision and refinement of the guidelines.

In the final analysis, PPBS is not easy. Its adoption in education will range from a glorified accounting system to a sophisticated, integrated, data-based management tool. This range will be dependent upon local community interest, resources, and staff analytical capabilities.

As any innovation, PPBS has serious limitations. It is probable that many of these limitations can be mastered as more analytical people become involved. PPBS is here to stay although not in its rudimentary form.

In short, PPBS is not an answer for every problem and is not an end in itself. However, it is a means to an end, the means being competing alternatives and the end being better educational management.